

REMARKS

Applicant has amended claims 1 and 4, and added new claims 5-6. Claims 1-6 are currently pending in this application.

The Examiner indicated that claim 4 would be allowable if it is rewritten in an independent form which includes all of the limitations of the base claims and any intervening claim. Applicant gratefully acknowledges the indication of allowable subject matter. Accordingly, Applicant has rewritten allowable claim 4 as claim 5 which incorporates the language of parent claim 1. New claim 6 depends from claim 5. Thus, Applicant submits that claims 5 and 6 are also patentable.

The Examiner objected to claim 4 due to the phrase "rotor's rotary shaft of the rotor". That phrase has been amended to "rotary shaft of the rotor". Withdrawal of the objection is requested.

More substantively, the Examiner rejected claims 1-3 under 35 U.S.C. Section 102(b) as being anticipated or as being obvious by Yang (US Patent No. 5925963). Although claim 1 has been amended, Applicant respectfully traverses the rejection to the extent that it applied to amended claim 1.

The present invention, as illustrated in the figures by way of example, concerns a motor, which is typically used in small electronic devices such as digital cameras and disk drives. As the Examiner can appreciate, the market demands an ever decreasing size of components as the electronic devices become smaller and smaller. In the context of a motor, the market demands a thin motor that is short in a direction perpendicular to the motor's axis. A conventional approach to reducing the stepping motor's thickness is to shrink the components in the motor. This conventional approach has a drawback in that it affects motor performance.

The present motor according to claim 1 addresses this problem by providing openings 20 (see FIG. 3D, for example) in side surfaces of a casing 2. To prevent a large amount of magnetic flux from leaking out of the motor, magnetic plates 4 that are thinner than the thickness of the material of the casing are used to close the openings. Since openings are provided on side surfaces of the casing, the motor can be very thin in a direction perpendicular to the motor axis.

Moreover, the part of the magnetic plates that face the side surfaces is flat as shown in FIGS. 3C and 3D, for example. This further allows the motor to be very thin.

This feature is recited in claim 1 as "the part of said magnetic plates facing the side surfaces being flat".

By contrast, the Yang device shows a magnetic cover plate 120 in FIG. 3 which is not flat and is rather bulky that adds thickness to the motor. None of the cited references teach or suggest a magnetic plate that is flat to minimize the thickness and to prevent leakage of the magnetic flux.

Claims 2-3 are also patentable by virtue of their dependency from independent claim 1.

Based upon the above amendments and remarks, Applicant respectfully requests reconsideration of this application and its earlier allowance. Should the Examiner feel that a telephone conference with Applicant's attorney would expedite the prosecution of this application, the Examiner is urged to contact him at the number indicated below.

Respectfully submitted,


Harry K. Ahn, Reg. No. 40,243
Attorney for Applicant

Reed Smith LLP
599 Lexington Avenue, 29th Floor
New York, NY 10022
Tel. (212) 521-5400